

No. 716,225.

Patented Dec. 16, 1902.

H. N. HANSEN.

ROOF.

(Application filed Apr. 19, 1902.)

(No Model.)

Fig. 1

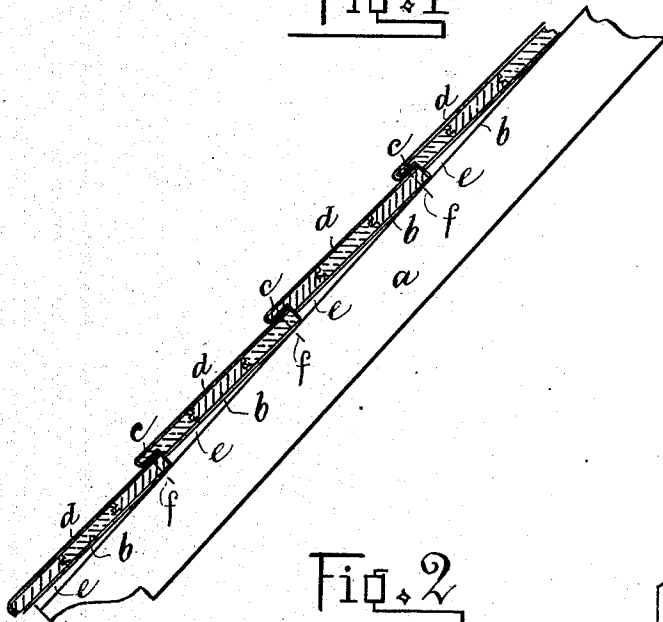
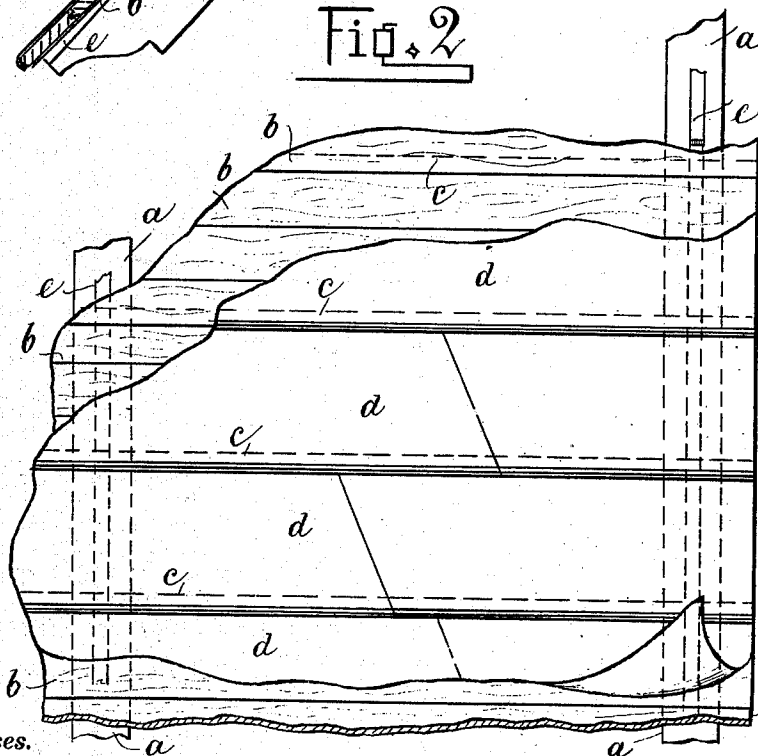


Fig. 2



Witnesses.

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ROOF.

SPECIFICATION forming part of Letters Patent No. 716,225, dated December 16, 1902.

Application filed April 19, 1902. Serial No. 103,789. (No model.)

To all whom it may concern:

Be it known that I, HANS NIELSEN HANSEN, carpenter, a subject of the King of Denmark, residing at Jyderup, in the county of Holbaek, Denmark, have invented certain new and useful Improvements in the Construction of Roofs, of which the following is a specification.

The usual board roofs covered with roofing-paper and consisting of an unbroken surface of match boarding extending from eave to ridge, having an even coat of roofing-paper nailed thereon, are objectionable in various ways. The large continuous area of wooden surface is so highly influenced by changes in temperature or atmosphere that the paper covering it is often burst, its elasticity not being sufficient to enable it to conform to the expansion and contraction of the wood. The wooden surface also from like causes frequently forms permanent bulges or depressions, detrimental to the durability and tightness of the roof. Finally, the tar or other dissolvable mass spread on the surface of the roofing-paper more readily dissolves and runs off from a continuous evenly-sloping surface than from one that is broken.

The object of my invention is to obviate these disadvantages; and to this end it consists in the employment of matched board sections or flakes of a breadth a little less than the usual breadth of roofing-paper and, circumstances permitting, of about the usual board length placed across the rafters in such manner that the upper edge of each section is covered by the nether edge of the succeeding section, the roofing-paper being applied to each section as it is laid in such manner as to be secured by the nails holding such section in place and to cover and conceal them when adjusted over the surface of said section, and also to afford a double thickness, the upper edge of one web and the lower edge of the succeeding web, between the overlapping joints of the sections.

In the drawings, Figure 1 is a fragmental vertical section through a roof constructed according to my invention, and Fig. 2 is a front view thereof.

Referring to said drawings, *a* indicates the rafters; *b*, the matched board sections or flakes with three boards to a section, which

is usually sufficient. The lower edge of each of these sections, except the first or nethermost, has a longitudinal rabbet *c* engaging the upper edge of the section immediately preceding, so as to overlap the same. The upper edge of one web *d* of roofing-paper and the lower edge of the next succeeding web are clamped between this rabbet and the edge and overlapped surface of the contiguous nether section, thus affording the double thickness heretofore alluded to. Wedge-shaped filling-pieces *e* are secured to the rafters butt-end downward to support the board sections and prevent them from sagging through the effects of time, atmosphere, or temperature.

The roof is laid in the following manner: The nether board section or flake having been placed in position upon the lowermost row of wedges in question, the nether edge of a web of roofing-paper is fixed beneath the lower edge of said section, and the web is then smoothed over the surface of the section and its upper edge fixed to the upper edge thereof. Upon this the lower edge of the succeeding roofing-paper web is fixed in inverted position—that is, while the body of the web is lying upon the nethermost web and exposing its eventual inner surface the second board section is placed in position with its rabbet embracing the upper edge of the first section and the two edges of paper webs lying thereon and is secured by nails *f*, passing through said double paper edges and the lowermost board section and into the rafters. The second paper web is now drawn up and folded over the second board section, covering the head of the nail, and its upper edge fixed to the upper edge of the latter, when the foregoing operation is repeated for the third section, and so on. The ends of the roofing-paper webs for such board section are preferably cut obliquely, as shown, and overlapped, so as to shed water, and the paper overlaps of one section advisably break joints with those of the succeeding section in order not to form continuous gutters. These overlaps can be cemented or otherwise calked. By this construction the continuity of the roof slope is broken; the individual board sections, owing to their limited breadth, will not be perceptibly affected by variations of temperature or atmospheric changes; fluid-

ized tar running off will be retarded by the smaller resultant slope of the roof and will be stopped at the overlapping joints of the board sections or flakes; the cost of laying the roof will be cheapened, since the sections can be knocked up in the shop, whether rain or shine, and the roof rapidly laid at a favorable opportunity, and other advantages attained which it is unnecessary to enumerate.

10 I claim—

1. The herein-described method of constructing roofs consisting in first preparing matched board sections of a width somewhat less than the width of the web of roofing-paper used, and of a suitable length, rabbeting 15 the lower edge of these except those destined to form the eaves, securing wedge-shaped filling-strips, butt-end downward, to the rafters, laying the eave-sections on the lower row of filling-pieces, securing the lower edge of a 20 web of roofing-paper underneath the nether edge of the eave-section, and laying it over the section and fixing its upper edge to the upper edge thereof laying a second web upside down upon the first, matching its temporary upper edge to the upper edge of the 25 first and fixing it, then laying a second board section with its rabbeted edge embracing and overlapping said dual paper edges, and the 30 upper edge of the nether board section, driving nails through the overlapping upper section, paper edges, overlapped part of the nether section and into the eaves to secure said sections, then turning the second paper 35 web up and over the nether edge of the sec-

ond section and over the heads of the fastening-nails, laying it upon said upper section, to receive in its turn the inverted edge of a third paper web and be clamped between the upper edge of the second board section and the rabbeted edge of a third section, and so on. 40

2. The roof herein described, comprising the rafters, the wedge-shaped filling-pieces secured thereto butts downward, the matched board sections of a width less than the roofing- 45 paper web, and all, except the eave-sections, having a rabbet along their lower edge and embracing and overlapping the upper edge of the next lower sections by said rabbet, securing-nails passing through said upper and 50 lower edges, and the roofing-paper webs covering the upper surfaces of the sections and the nails therethrough and having their edges doubled between the rabbet of the upper section and the upper edge of the lower section. 55

3. The combination with notched board roofing-sections having overlapping joints, of roofing-paper webs covering each individual section and having their edges confined between the overlapping edges of said section 60 and the next, their ends being cut obliquely and overlapped and cemented and said paper overlaps breaking joints with the paper overlaps of the contiguous board sections.

In testimony whereof I affix my signature 65 in presence of two witnesses.

HANS NIELSEN HANSEN.

Witnesses:

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